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# **Assisting or Replacing the Conjugal Act: Criteria for a Moral Evaluation of Reproductive Technologies**

by

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Earlier this century, Pope Pius XII addressed the morality of artificial insemination in four allocutions.<sup>1</sup> In doing so, he laid a foundation for determining the morality of various technical means to achieve conception. They can be licit if they assist the conjugal act, and they are illicit if they replace the conjugal act. This teaching was further developed in the more recent instruction of the Congregation for the Doctrine of the Faith: *Donum Vitae*.<sup>2</sup>

The Magisterial teaching is clear: the technologies that assist the conjugal act can be licit; those that replace it are illicit. What is not clear, however, is how one determines whether a reproductive technology assists or replaces the conjugal act. For some technologies, such as in vitro fertilization, the determination is easy. They replace the conjugal act since there is no conjugal act at all, and fertilization occurs outside the mother's body. Furthermore, the Magisterium has determined that certain procedures are illicit.<sup>3</sup> Yet for other technologies, the determination remains difficult, and the Magisterium has not pronounced on their liceity. For example, reputable theologians faithful to Magisterial teaching are divided whether GIFT (Gamete Intrafallopian Transfer) assists or replaces the conjugal act, and the Magisterium has not determined its liceity. In a

press conference on the day *Donum Vitae* was promulgated, Bartholomew Kiely, SJ said, "The instruction does not pronounce a judgment on GIFT. It leaves it open to research by biologists and further discussion by theologians."<sup>4</sup> Because it is not clear how to determine which technologies assist the conjugal act, Edward Vacek has noted that

[w]e will have to await clarification from the Vatican on what kinds of medical interventions are permitted. A marital sexual act done with love is required. To some this implies two spatial criteria: the sperm must be ejaculated in the vagina, and fertilization must take place in the body of the woman. Clarification will be needed on whether the Instruction permits ova to be medically removed, on whether the sperm can be withdrawn from the vagina *post coitum*, and on whether the sperm and ovum can then be inserted in the womb or in a fallopian tube.<sup>5</sup>

Therefore, clear criteria are needed to determine whether a reproductive technology assists or replaces the conjugal act.

In this essay, I will strive to elucidate such criteria, thereby facilitating the application of the teaching of *Donum Vitae*. First, I will examine the recent discussion of reproductive technologies, primarily GIFT/TOTS,<sup>6</sup> to see how various authors determine whether a given reproductive technology assists or replaces the conjugal act. The most attention will be given to Peter Cataldo and Josef Seifert, who do in fact articulate criteria to determine the assistance to or replacement of the conjugal act. Other authors propose criteria implicitly by arguing for or against the liceity of various technical interventions. I will determine which criteria are unsuitable and need to be excluded by falsifying certain views. I will also determine which criteria are suitable by verifying and further developing other viewpoints. Second, I will propose various criteria that can be used to distinguish assistance to the conjugal act from replacement, and, third, I will apply these criteria to selected reproductive technologies.

## **A. Proposed Criteria to Distinguish Assistance from Replacement**

### **1. A Natural Act of Intercourse**

Carlo Caffarra offers a rich anthropological meditation and then applies it to a moral evaluation of different reproductive technologies.<sup>7</sup> When it comes to the question of criteria to determine whether a reproductive technology assists or replaces the conjugal act, the following passage is most pertinent:



What is ethically essential, then, is that between two spouses there be a true and proper conjugal act. This has already been demonstrated in the first part of the presentation. By "a true and proper conjugal act" should be understood "the activation of that capacity for sexual activity without which capacity, according to the theological and canonical doctrine of the Church, one would be up against the *impediment of impotency*".

From the ethical point of view, once *this* act has been posited, *nothing else is required of the two spouses*. Any subsequent recourse they may have to some artificial intervention amounts, therefore, to giving assistance *to the procreative act* which, insofar as it is a human act, *has already in itself been completed*.<sup>8</sup>

He requires just one criterion, a true and proper conjugal act. If this has been done, all other interventions can be considered as forms of assistance.

However, Caffarra overlooks an important criterion advanced by *Donum Vitae*. The child must be the fruit of the conjugal act;<sup>9</sup> that is, the conjugal act must be the principal cause of the child's conception. Nicholas Tonti-Filippini astutely observes that *Donum Vitae* not only requires that there must be a true and proper conjugal act, but also that the child conceived must be the fruit of the conjugal act. "That is to say, the conjugal act must have a direct causal relationship to the origin of new life."<sup>10</sup>

Thus, it is not simply enough to say that the conjugal act is completed. It is also pertinent whether the conjugal act is successful in causing conception. More specifically it is pertinent whether a technical means assists the conjugal act in causing conception or replaces it. According to Caffarra's criterion, if there is a natural act of intercourse, is it then guaranteed that the conjugal act will still be the principal cause of conception no matter what subsequent interventions are employed? Some assert that the conjugal act is closely associated with a natural process. Caffarra does not see any relevance of the natural processes subsequent to the conjugal act because, from the ethical point of view, the conjugal act is completed. Yet these natural processes may have important ramifications for determining whether a technology assists the conjugal act. If these natural processes are interrupted by the technical intervention, does that disrupt the causal connection between intercourse and conception? If so, the one criterion he proposes, though true, may be insufficient by itself because more must be taken into account.

## **2. The Child Conceived as the Fruit of the Conjugal Act, and the Moral Unity between the Conjugal Act and the Reproductive Technology**

Orville Griesse believes that GIFT/TOTS could be morally licit. There is a true and proper conjugal act open to life. Because conception could occur by the sperm deposited in the vagina, the causal link between the conjugal act and conception is preserved, and so also the inseparable bond between the unitive and procreative meanings of the conjugal act is preserved.

Since some theologians might insist that the TOT procedure could be morally acceptable only if there is some possibility of a causal relationship between the preliminary conjugal union and conception, it should suffice to point out that there is always the *possibility* that the husband's sperm deposited in the wife's vagina during the preliminary act of conjugal union could account for the fertilization of the repositioned ova. Due to that undeniable possibility, the inseparable bond between the unitive and the creative dimension of that particular preliminary act of conjugal union remains intact with regard both to intent and fact.<sup>11</sup>

Finally there is a moral union between the conjugal act and the intervening technical procedure because of the short duration of time needed to perform the procedure after the conjugal act has been posited.<sup>12</sup>

Donald McCarthy argues for the possible liceity of GIFT/TOTS because there is a true and proper conjugal act and the child conceived would be the fruit of the conjugal act.

The Vatican Instruction teaches that "procreation is deprived of its proper perfection when it is not desired as the fruit of the conjugal act, that is to say, of the specific act of the spouses' union" (II, B, 4a). In the case of TOTS, a true conjugal act takes place. The fertilization which occurs may result from the husband's sperm which are deposited directly in the wife's vagina. It may more likely occur from the sperm that are inserted in the Fallopian tube. In either case, normal in vivo fertilization occurs as a result of a specific and proper procreative act of the spouses.<sup>13</sup>

In addition, he believes that GIFT/TOTS is probably licit because fertilization takes place within the body of the mother, in its natural location as opposed to in a laboratory with in vitro fertilization. Furthermore, the conjugal act is not replaced by the technical intervention, which merely repositions the gametes in a somewhat similar way as the use of a syringe to propel the sperm further up the woman's reproductive tract. It so aids the conjugal act in reaching its objectives because it forms a



moral unity with the conjugal act derived from the same end. Thus, the conjugal act remains the essential step leading to conception.<sup>14</sup>

Germain Grisez's primary criterion is that the child conceived must be the fruit of the conjugal act, that is, the conjugal act must be the real cause of the child's conception. The conjugal act is not the real cause of the child's conception if it is merely incidental to the procedure. Furthermore, a procedure does not assist the conjugal act if it does not share the same goal as the conjugal act. In other words, there must be a moral unity, which is derived from the end, between the conjugal act and the technical procedure.<sup>15</sup>

Grisez believes that the conjugal act is incidental to the procedure GIFT/TOTS, and for this reason, the causal link between the conjugal act and conception is sundered. Fertilization is not caused by the conjugal act because the sperm that are used in the procedure are not deposited in the vagina by the conjugal act. Instead, the sperm utilized to fertilize the ovum in GIFT/TOTS have been *intentionally withheld* from the marital act and collected in the silastic sheath. Furthermore the ovum to be utilized is removed from the woman prior to intercourse and then later introduced after intercourse. Since the ovum is absent during the marital act, its fertilization can hardly be considered the aim of the marital act. In sum, the child conceived would in no way be the fruit of the conjugal act, since the ovum and sperm that are used in no way pertain to the conjugal act. The sperm have been intentionally withheld from the act, and the ovum removed prior to the act. The man and woman would merely provide the material for the technical procedure from which conception is the fruit.<sup>16</sup> If this were the sole criterion for the moral evaluation, one would reach a conclusion similar to Germain Grisez's.

Assisting the marital act is not wrong in itself, so long as the couple engage in a genuine marital act that remains the real cause of the child's conception. Instead of the actual procedure used in TOTS, suppose that after the couple engaged in a normal act of intercourse, the semen were taken from the vagina and/or the ovum from the ovary, and one or both elements, perhaps after treatment of some pathological condition or conditions, were moved to the fallopian tube where they could meet. Provided the intention motivating such procedures were precisely to assist the marital act, these steps would do that. Somewhat similar technical maneuvers, however, could violate rather than assist the marital act, if they were intended, for example, merely as a scientific experiment or as a way to delay conception by freezing the elements so that the couple might choose to have a child later.<sup>17</sup>

As long as there is a true and proper conjugal act and the sperm used in any subsequent intervention has been deposited in the vagina, the subsequent interventions are considered to assist the conjugal act. Such interventions share in the same goal or end as the conjugal act and would be said to assist in just that way. The continuity of the causal process is preserved insofar as the unity of the end is maintained. The conjugal act and the subsequent interventions all aim at the same goal, so the technical interventions are said to assist the conjugal act achieve that same goal. When the goal of the interventions is different from that of the conjugal act, for example when they are used for experimental purposes or to delay conception, the unity of the causal processes is broken. The interventions could no longer be said to assist the conjugal act because they no longer aim at the same goal as the conjugal act.

These authors implicitly propose the following criteria for determining whether a reproductive technology assists or replaces the conjugal act. 1) *There must be a true and proper conjugal act.* 2) *The child conceived must be the fruit of the conjugal act.* 3) *In order for the child conceived to be the fruit of the conjugal act, the conjugal act must not be merely incidental to the procedure.* 4) *Conception must take place within the mother's body.* 5) *There must be a moral unity between the conjugal act and a subsequent technical intervention.*

Once again, the first criterion is obvious. Any technical intervention cannot be said to assist the conjugal act if there is no conjugal act.

With respect to the second criterion, McCarthy observed that *Donum Vitae* requires that the child conceived be the fruit of the conjugal act. However, McCarthy holds that in GIFT/TOTS the child could be the fruit of the conjugal act either from the sperm deposited in the vagina or from the sperm inserted into the fallopian tube, and Griese just presumes that this causal link between the conjugal act and conception is preserved if the sperm is deposited in the vagina and so could possibly fertilize the ovum. Though this is a true criterion enunciated by *Donum Vitae*, these authors do not adequately explain how it must be fulfilled, for they do not examine the possibility that a subsequent intervention might frustrate the causal influence of the conjugal act on fertilization. This topic will be taken up in greater detail later.

The third criterion helps to discern whether the child is the fruit of the conjugal act. As Grisez observed, if the gametes used to obtain conception do not pertain to the conjugal act, then the conjugal act is merely incidental to the procedure, and the child cannot be the fruit of the conjugal act.

The fourth criterion is also an important one. McCarthy posits this criterion by observing that the conjugal act aims at fertilization within the mother's body. Fertilization outside the mother's body is not the proper



goal of the conjugal act.<sup>18</sup> Furthermore, fertilization outside the mother's body subjects human generation to the liabilities of the laboratory.<sup>19</sup> Further discussion will present additional reasons for the truth of this criterion.<sup>20</sup>

The fifth criterion of moral unity is also necessary. Griesse and Hess seem to consider moral unity with respect to the time within which the intervention occurs. It seems to be necessary to preserve moral unity that the subsequent intervention and resulting conception occur within a time period somewhat proximate to the conjugal act. Otherwise, for example, if the sperm and ovum were harvested and injected into the fallopian tube a year later, how could one say that the resulting conception would be the fruit of a conjugal act that had occurred a year earlier? However, Griesse and Hess do not provide any reasons for the truth of moral unity based on time. Though it seems true, it must be true for some reason. McCarthy and Grisez consider the moral unity of the technical intervention in terms of a shared goal. To preserve moral unity, the technical intervention must have the same goal as the conjugal act, namely, fertilization within the mother's body. McCarthy believes GIFT/TOTS preserves that moral unity because the sperm and ovum are merely repositioned to achieve that goal, fertilization within the mother's body. Grisez believes that a technical intervention would share the same goal as the conjugal act if the sperm were removed from the vagina after intercourse and later introduced. Obviously, if a technical means were employed for a purpose other than obtaining conception, for example for experimental purposes, it could not be said to assist the conjugal act achieve conception. Yet this criterion of moral unity derived from the end is insufficient in itself for it does not consider whether any subsequent intervention, even though it shares the same end as the conjugal act, may disrupt the causal link between the conjugal act and conception. More must be considered to determine whether conception is the fruit of the conjugal act.

In sum, these five criteria are important to determine whether a reproductive technology assists or replaces the conjugal act. However, this presentation of the criteria is deficient in that it does not provide an adequate account of how to determine whether the child is the fruit of the conjugal act.

### **3. Principal and Instrumental Causes, Active Condition, and the Immediate Causal Factors that are Natural**

Peter Cataldo presents a detailed account of how to determine whether the child is the fruit of the conjugal act. He says:



It is important to interpret the meaning of substitution or replacement in this context as referring not simply to (1) the elimination of the physical act of marital coitus, but also to (2) the usurpation of the proper causality of the conjugal act beyond coitus, even though that act may have been performed and the semen collected in a morally acceptable way. Since assistance to the conjugal act includes assistance to the generative process as the natural objective beyond the physical act of coitus, the meaning of substitution or replacement must also refer to that same process beyond coitus. I will presume both meanings of substitution and replacement throughout my analysis. Procedures that *assist* the conjugal act preserve the essential link between the conjugal act as the beginning and end points of a process. Those that *replace* the conjugal act sever the link.<sup>21</sup>

In order to determine whether the link between the conjugal act and conception is preserved, Cataldo introduces the distinction between principal cause, instrumental cause, and active condition. The conjugal act remains the principal cause of conception provided that the reproductive technology serves as an instrumental cause or supplies the active conditions.<sup>22</sup> In this light, Cataldo offers the following definition of assistance and replacement and the criterion to distinguish assistance from replacement.

Extrapolating from *Donum Vitae* and considering the causal concepts examined above, the following definitions for replacement and assistance may be given: *A procedure replaces the conjugal act if either coitus is not performed, or the conjugal act is not the principal (per se) cause of fertilization itself. A procedure assists the conjugal act if it supplies the instrumental causes and active conditions(s) for the conjugal act to function as the principal (per se) cause of fertilization itself.* A criterion for morally evaluating specific procedures consistent with the definitions would be: *A procedure replaces the conjugal act if it determines, of itself, and immediately, the success of fertilization. A procedure assists the conjugal act if it does not determine, of itself, and immediately, the success of fertilization, but rather allows fertilization to take place under immediate causal factors that are natural.* This criterion covers both types of assistance in the teaching, viz., assistance to the performance of the conjugal act itself and to the attainment of its objective.<sup>23</sup>

There are two major strengths and two major weaknesses to Cataldo's proposed definition of assistance and replacement and his proposed criterion to distinguish assistance from replacement. These strengths and weaknesses will now be considered.

## **a. Strengths of Cataldo's Definition and Criterion**

### **i. The Conjugal Act Must Be the Principal Cause of Fertilization**

In order to distinguish assistance from replacement, Cataldo notes that it is necessary to employ the concept of causality from metaphysics.<sup>24</sup> A principal cause is per se responsible for the effect, and so Cataldo, in referring to *Donum Vitae*, shows how the conjugal act is to be the principal cause of fertilization:

The conjugal act is described in terms of per se causality in *Donum Vitae* where it states that the conjugal act is "per se suitable for the generation of children to which marriage is ordered by its nature and by which the spouses become one flesh." The conjugal act of the spouses is aptly suited as a principal cause since both spouses act together as principal agents in an action ordered to the effect of the existence of a new human life which, as such, is an effect that has an essential likeness to the human nature of the parents. Thus the spouses, in and through their conjugal act, are the conjoined principal causes of the child. This is what is meant by the description of the conjugal act as the principal cause of fertilization.<sup>25</sup>

This observation will be critically important in distinguishing assistance from replacement. If some cause other than the conjugal act, namely a technical means, is the principal cause of fertilization, then the conjugal act is replaced. If the conjugal act remains the principal cause of fertilization, and the technical means is the assisting cause of fertilization, then the conjugal act is assisted. The question then, will be to distinguish what is the principal cause and what is the assisting cause of fertilization.

### **ii. Supplying an Active Condition(s) as a Type of Assistance**

Cataldo describes an active condition as something that removes obstacles that prevent a cause from being effective. An active condition makes "it possible for a cause to exercise its activity. In general we may define a condition as a circumstance or set of circumstances that makes it possible for something to operate as a cause."<sup>26</sup> An active condition simply removes obstacles that frustrate the causality of the conjugal act. Thus, one can conclude that "[p]rocedures that assist the conjugal act can also be said to supply the active condition(s) for the act to function as the principal cause of fertilization."<sup>27</sup>

The truth of this conclusion, which Cataldo also incorporates in his definition of assistance, can be easily seen. An active condition as such



does not exert a positive causal influence on the final effect. It just provides the circumstances in which the principal cause can bring about the effect. In this regard, Robert Kreyche astutely observes that

every real cause (in whatever order of causality) exercises a *positive* influence. Similarly, every effect is said to depend really and positively on the cause or causes that contribute to it. At this point, however, we must consider the distinction between a cause in the proper sense of the term and something characterized as a condition.

A condition should not be called a "cause," because the "influence" of a condition is chiefly *negative*. . . . [T]he influence of the condition is negative in that it consists in the *removal of obstacles* without which the effect could not take place. Hence, the role of a condition as such is to make it possible for a cause to exercise its activity.<sup>28</sup>

Because an active condition does not exert any positive causal influence as such on the effect, it cannot be considered the principal cause of the effect. It does not, then, usurp the primacy of the principal cause. Rather, it remains subordinate to and so assists the principal cause in bringing about the effect.

Cataldo adds an important point that must be considered to determine whether, in fact, a reproductive technology provides an active condition.

Any criterion that applies the teaching to procedures would need to distinguish those that provide active conditions from those that do not. In other words, there is a difference between procedures that provide active conditions, which remove a hindrance specific to the natural causality of the conjugal act, and procedures that remove a hindrance only accidentally, as a result of creating a whole new line of causality for fertilization.<sup>29</sup>

To make such a distinction, Cataldo notes that fertilization must occur under the immediate causal factors that are natural, for he notes that "*Donum Vitae* focuses on those specific causes and conditions that bring about the act of fertilization itself," and that the Instruction requires that conception takes place within the mother's body.<sup>30</sup> In this way, Cataldo believes that one would be dealing with a procedure that truly, and not accidentally, removes a hindrance, because it would allow fertilization to occur in its natural place, allowing the conjugal act to exercise its principal causality. For this reason he believes that GIFT provides the active conditions for the conjugal act to be effective. It allows conception to take place under the immediate causal factors that are natural. The immediate



causal factors under which fertilization occurs are not determined or created by the procedure.<sup>31</sup> For this same reason he believes that in vitro fertilization only accidentally removes a hindrance and does not, therefore, supply the active conditions for the conjugal act to exercise its principal causality. It introduces its own line of causality because the procedure itself supplies the immediate causal factors that bring about fertilization. Thus, the procedure, and not the conjugal act, causes fertilization.<sup>32</sup>

In sum, Cataldo makes an important contribution in the attempt to distinguish assistance from replacement. A procedure assists if it supplies an active condition(s) for the conjugal act to exercise its own principal causality. If fertilization occurs outside the mother's body, the technical means does not truly supply an active condition(s), rather it introduces a whole new line of causality that replaces the conjugal act.

## **b. Weaknesses of Cataldo's Definition and Criterion**

### **i. The Introduction of the Term "Instrumental Cause"**

As noted above, Cataldo defines a procedure that assists the conjugal act in this way:

*A procedure assists the conjugal act if it supplies the instrumental causes and active condition(s) for the conjugal act to function as the principal (per se) cause of fertilization itself.*<sup>33</sup>

If he said "supplies the assisting causes" instead of "instrumental causes", I would not object. However, the use of "instrumental cause" in his definition brings difficulties to the attempt to distinguish assistance from replacement. I will now proceed in three steps in order to illustrate these difficulties: a) Cataldo's definitions of principal and instrumental causes along with the conclusion he reaches; b) the first difficulty in the term "instrumental cause"; c) finally, the second difficulty in the term "instrumental cause".

#### *a) Principal and Instrumental Causes*

The principal cause is per se responsible for the effect and acts on its own power.<sup>34</sup> "The conjugal act is described in terms of per se causality in *Donum Vitae* where it states that the conjugal act is 'per se suitable for the generation of children to which marriage is ordered by its nature and by which the spouses become one flesh.'"<sup>35</sup> The principal cause is primarily responsible for the effect; whereas, the instrumental cause plays a

subordinate role in bringing about the effect. Cataldo defines an instrumental cause as "something other than, and extrinsic to, the principal cause or agent, which uses the instrument to bring about an effect."<sup>36</sup> The instrument is really a cause since it is in some way responsible for the effect. For example, the types of brushes that the artist uses will determine the texture and definition of the painting, yet the artist as such remains the cause of the painting. He is primarily responsible for the painting and the brushes have a subordinate role. Cataldo then distinguishes two types of instrumental causes: (A) one that acts simply in a one-to-one relationship, as a writer (the principal cause) uses a pen (the instrumental cause) to write (the effect); and (B) "the instrumental use or application of something that acts with its own *principal* causality, e.g., the transfusion of blood to produce health."<sup>37</sup> This distinction between the two types of instrumental causes will be taken up later in greater detail.

Then, after examining principal and instrumental causality, Cataldo concludes:

Reproductive technologies that provide genuine assistance are those that constitute the instrumental causes to the principal cause, the conjugal act. The instrumentality of these procedures is a combination of the two types of instrumental causes. The natural, principal causality of the conjugal act is used and applied for its own fulfillment (B above) by means of other various instrumental causes (A above).<sup>38</sup>

The two difficulties can now be seen by taking up the two parts of this conclusion.

### *b) The First Difficulty*

The first way in which the term "instrumental cause" muddies the waters arises because Cataldo overlooks that there are two manners in which an instrumental cause can be an assisting cause. In the first manner (1), an instrumental cause is *necessarily* an assisting cause *with respect to the agent or cause that applies it*. An instrumental cause must be applied by a principal cause to which it is subordinate, or which it assists. Cataldo himself indicated this in his definition of an instrumental cause: "something other than, and extrinsic to, the principal cause or agent, *which uses the instrument to bring about an effect*."<sup>39</sup> In this way, an instrumental cause is *necessarily* an assisting cause insofar as it assists the principal cause that applies it. For example, when an author uses a pen to write a letter, the pen, the instrumental cause, is necessarily an assisting cause with respect to the author who uses the pen. In the second manner (2), an



instrumental cause *may or may not* be an assisting cause *with respect to an agent or cause other than the one that applies it*. For example, a person dictates a letter to a scribe who uses a pen to write it. The pen is an instrument applied by the scribe. Even though the pen is not applied by the person dictating the letter, one can still see that the pen assists the person dictating to write the letter. Yet on the other hand, for example, a beaver begins to gnaw on a tree to bring it down. After he takes only a few bites, a man comes by, scares the beaver away and chops down the tree with an axe. The axe is an instrument applied by the man. The beaver is a cause other than the one that applied the instrument. Here the axe does not assist the beaver. The axe assists the man who remains the principal cause of felling the tree, for he provided by far most of the effort. If anything, the beaver is another assisting cause. He assisted the man in felling the tree, insofar as he took out a small chunk of the tree with his teeth.

In the first part of his conclusion, Cataldo considers the reproductive technologies with respect to the conjugal act: "Reproductive technologies that assist are those that are instrumental causes to the principal cause, the conjugal act."<sup>40</sup> However, the conjugal act is *not* the agent that applies the technologies; the medical personnel apply the technologies. Therefore, the technologies are the instruments of the medical personnel, or perhaps also the spouses, but they are not instruments of the conjugal act.

This is where the confusion arises. Instrumental causes (in this case the reproductive technologies) are *necessarily* assisting causes with respect to the agent or cause that applies them. The medical personnel, or perhaps also the spouses, are the agents or causes that apply them. Therefore, the reproductive technologies are necessarily assisting causes with respect to the medical personnel, or perhaps the spouses. Instrumental causes (in this case the reproductive technologies) *may or may not* be assisting causes with respect to an agent or cause other than the one that applies them. The conjugal act is a cause other than the one that applies them. Therefore, the reproductive technologies *may or may not* be assisting causes with respect to the conjugal act.

Thus, defining assistance to the conjugal act in terms of "instrumental causes" brings confusion to the attempt to distinguish assistance from replacement. Since the reproductive technologies are not applied by the conjugal act, *insofar as they are instrumental causes*, they may or may not assist the conjugal act in achieving conception. Now the use of a technical means may still assist the conjugal act, but one cannot determine that it assists *insofar as it is an instrumental cause*, for it is not an instrument applied by the conjugal act as the principal agent, but by the medical personnel or perhaps even the spouses. Thus, one might say that a technical means is an instrumental cause that assists the medical personnel



who apply it, but then it still needs to be determined whether the medical personnel are assisting the conjugal act by applying this technical means.

### c) *The Second Difficulty*

There is a second way in which the term "instrumental cause" muddies the water. There are two types of instrumental causes. Cataldo considers the second type of instrumental cause to be a *principal* cause. This is where the problem lies, for, properly speaking, an instrumental cause is an *assisting* cause, not a *principal* cause. As already noted above, Cataldo describes the two types of instrumental causes this way: (A) one that acts simply in a one-to-one relationship, as a writer (the principal cause) uses a pen (the instrumental cause) to write (the effect); and (B) "the instrumental use or application of something that acts with its own *principal* causality, e.g., the transfusion of blood to produce health."<sup>41</sup> He then incorporates this notion of the two types of instrumental causes in his conclusion:

The instrumentality of these procedures is a combination of the two types of instrumental causes. The natural, principal causality of the conjugal act is used and applied for its own fulfillment (B above) by means of other various instrumental causes (A above).<sup>42</sup>

In this conclusion he seems to think that the natural causality of the conjugal act is an instrumental cause of the second type (B) that in turn is applied by the technical procedures, which are instrumental causes of the first type (A). There is some problem in analyzing Cataldo's position here, because he does not say how the natural causality of the conjugal act is the second type of instrumental cause. He does not say how it is applied by the other instrumental causes. He simply asserts this.

One can only surmise what may have led him to assert that the natural causality of the conjugal act is an instrumental cause of the second type (B) that in turn is applied by the technical procedures, which are instrumental causes of the first type (A). If one looks at the procedure GIFT/TOTS, one might be able to uncover his thought. Perhaps Cataldo considers the introduction of the sperm and ovum into the fallopian tube in this procedure as something analogous to a blood transfusion, since the sperm and ovum act with their own proper causality within the mother's body, just like blood acts with its own proper causality in a blood transfusion. Even though it is not clear how Cataldo reaches his conclusion, he will be given the benefit of the doubt.

Regardless of how Cataldo concluded that the natural causality of the conjugal act is an instrumental cause of the second type (B) applied in turn by the technical procedures which are instrumental causes of the first type (A), one might look at Cataldo's position in this way. Since the second type of instrumental cause is a principal cause, it remains a principal cause even though it is applied by another agent or cause. Since the natural causality of the conjugal act is the second type of instrumental cause, it remains a principal cause even though it is applied by some other agent or cause. Because Cataldo considers the second type of instrumental cause to be a *principal* cause, he can maintain that the natural causality of the conjugal act remains the principal cause of conception even though it is applied by the technical procedure.

Yet as already noted, there is a problem here insofar as Cataldo considers the second type of instrumental cause to be a principal cause. Properly speaking, all instrumental causes are not principal causes; they are assisting causes. Thus, if the natural causality of the conjugal act is the second type of instrumental cause (B), it cannot be the principal cause of conception. Instead of describing the second type of instrumental cause the way Cataldo does as "the instrumental use of something that acts with its own *principal* causality," it is better to describe it as "the instrumental use of something that acts with its own *proper* causality."

To see better Cataldo's misunderstanding, let us now take a closer look at this second type of instrumental cause. Another author, Martin Vaske, SJ, describes the second type of instrumental cause this way:

Natural forces may be used *instrumentally* to bring about an effect intended by the principal cause. A lumberjack, for example, instead of grubbing up the stump of a tree by the direct use of simple instruments, such as an axe and a shovel, may use the natural power of dynamite to blow the stump sky-high. In such cases, the powerful activity of a *natural* agent is directed along an intended line by the principal cause.<sup>43</sup>

This second type of instrumental cause (B) may also be seen in the work of the brewmaster who pitches yeast into the wört to make beer. The brewmaster is the principal cause of the beer, but he makes use of the natural activity of the yeast to do so. In these examples, the lumberjack and the brewmaster are primarily responsible for the effects; they are the *principal* causes. The dynamite and the yeast play a subordinate role in bringing about the effects. They are the instrumental causes that are applied under the direction of the principal causes. Thus, it is best to describe the second type of instrumental cause as "the instrumental use of



something that acts with its own *proper* causality.” In this light, one can see that if the natural causality of the conjugal act is an instrumental cause that is applied by the technical procedures, then the natural causality of the conjugal act is the assisting cause and the technical procedure the principal cause of conception.

In sum, there are two major difficulties in defining assistance to the conjugal act in terms of instrumental causes. First, instrumental causes are *necessarily* assisting causes with respect to the agent or cause that applies them. Instrumental causes *may or may not* be assisting causes with respect to an agent or cause other than the agent or cause that applies them. Since the conjugal act is a cause other than the agent or cause that applies the reproductive technologies, the reproductive technologies, as instrumental causes, may or may not be assisting causes with respect to the conjugal act. Second, all instrumental causes are assisting causes subordinate to the principal causes that apply them. If, in fact, the natural causality of the conjugal act is an instrumental cause, then it is an assisting cause subordinate to the technology that applies it. Thus, the technology would be the principal cause, and the conjugal act the assisting cause of conception. Perhaps Cataldo’s difficulty stems from overlooking that an instrumental cause is not the only type of assisting cause.

## **ii. Drawing the Line at the Immediate Causal Factors That Bring About Fertilization**

Cataldo misunderstands the causal continuity between the conjugal act and conception. To distinguish assistance from replacement, he draws the line at the immediate causal factors that bring about fertilization. This, perhaps, is the greatest weakness of his position. He states:

The reproductive technologies analyzed here affect the objective of the conjugal act. For this reason it is critical to note that the criterion proposed below for morally evaluating procedures centers on the way in which fertilization takes place in the procedures. The act of fertilization is pivotal in *Donum Vitae* for determining whether a procedure has replaced the conjugal act. With respect to assistance for what is called the “natural purpose,” “proper end,” or “natural objectives” of the conjugal act, *Donum Vitae* focuses on those specific causes and conditions that bring about the act of fertilization itself. Accordingly, the criterion has been formulated on that basis. This is also why *Donum Vitae* explicitly emphasizes the fact that in IVF fertilization occurs outside the body. . . .

If and when fertilization is successful in IVF, it is so precisely because of active conditions that are outside and independent of the



body. Thus, in the language of *Donum Vitae*, fertilization has been determined by technical action. Given the pivotal role of fertilization in *Donum Vitae* for making ethical evaluation, any criterion for distinguishing between procedures that assist and procedures that replace must draw the line at the *immediate* causal factors within the procedures – both causes and active conditions – that bring about fertilization itself. Whether these factors are due to the procedure is not the question. By contrast, if the line were not drawn at fertilization, then the distinction between assistance and replacement would collapse. By not beginning a moral evaluation with the factors of fertilization itself, any third party action . . . interposing itself at any point between the conjugal act and fertilization could arguably be considered as replacing the causal action of the conjugal act.<sup>44</sup>

Cataldo then provides his criterion to determine whether a procedure assists or replaces the conjugal act.

*A procedure replaces the conjugal act if it determines, of itself, and immediately, the success of fertilization. A procedure assists the conjugal act if it does not determine, of itself, and immediately the success of fertilization, but rather allows fertilization to take place under the immediate causal factors that are natural.*<sup>45</sup>

If one considers this criterion more closely, one notes that it is true, but not sufficient. The immediate causal factors that are natural can only be found within the mother's body. Clearly, if fertilization occurs outside the mother's body, for example, in a procedure such as in vitro fertilization in which the gametes meet because they are placed in a culture medium in a petri dish, these immediate causal factors introduce a whole new line of causality, and the causal link between the conjugal act and conception is sundered. The conjugal act could no longer be considered the principal cause of conception.<sup>46</sup> The immediate causal factors in this technical intervention, as well as any technical intervention that occurs outside the mother's body, determine of themselves and immediately the success of fertilization. Therefore, fertilization can only occur within the mother's body, as *Donum Vitae* so observes.<sup>47</sup> Furthermore, provided that there is a true act of intercourse, the gametes are obtained in a morally licit way, and fertilization occurs within the mother's body, that is, under the immediate causal factors that are natural, any technical means employed would be said to assist the conjugal act. Yet the insufficiency of this criterion can be seen in light of an example provided by Nicholas Tonti-Filippini.

Consider the situation in which sperm has been obtained from the vagina subsequent to a "true and proper conjugal act", but is frozen awaiting its use in a GIFT procedure. Ova are obtained and these too are frozen and stored in order to await the recovery of the uterus from the effects of the superovulants or some other illness. Eventually, say five months later, the ova and sperm are thawed and transferred separately to the fallopian tubes where a new life originates.<sup>48</sup>

In this case, conception would occur under the immediate causal factors that are natural, and so would meet Cataldo's requirement for assistance. However, could a conception really be caused by a conjugal act that took place five months earlier? In some way Cataldo's criterion is insufficient.

If one adds to Cataldo's criterion the one of moral unity based upon time which was discussed above, the difficulty proposed by Tonti-Filippini's example could be avoided, for such a procedure would not meet the criterion of moral unity based upon time. In fact, in another work, Cataldo proposes such a criterion. He holds that the sperm must be used within seventy-two hours of its collection because that is the period of its natural viability for fertilization.<sup>49</sup> However, in the discussion of this criterion as proposed by Griese and Hess, no cogent reasons are given why it must be met. It is simply asserted. Yet Cataldo supplies a reason: seventy-two hours is the period of natural viability of the sperm for fertilization. However, must the sperm be used within seventy-two hours just because this is the natural period of viability? Why could not freezing the sperm to use it later be considered an assistance insofar as it extends the period of viability? There must be some reason why such a delay frustrates the principal causality of the conjugal act.

Cataldo observes that the conjugal act initiates a whole process or series of secondary causes that lead to conception, and that assistance and replacement must also refer to this generative process beyond the conjugal act.<sup>50</sup> Subsequent discussion will show that if the continuity of this natural causal chain is broken, the principal causality of the conjugal act is replaced. Yet Cataldo does object to such a criterion,<sup>51</sup> and his objections and answers to them will be taken up in the course of discussion. Attention now turns, then, to the discussion of the natural processes, which are subsequent to the conjugal act and lead to conception, and the necessity of the continuity of this causal chain to preserve the principal causality of the conjugal act.

#### **4. The Fruit of the Conjugal Act and the Continuity of the Causal Process from the Conjugal Act to Conception**



### **a. Inadequate Accounts of the Necessary Continuity of the Causal Process**

Some authors believe that the multiple technical interventions in GIFT/TOTS break the continuity between the conjugal act and conception.<sup>52</sup> It seems that implicit in this objection to GIFT/TOTS might be the inviolability of the natural processes that are initiated with the conjugal act and lead to conception. For example, DeMarco provides a distinction between assisted and artificial insemination based upon natural processes.

In "assisted" forms of insemination, the sperm retains its own capacity for movement and travels through its naturally appointed course. Insemination is artificial when the sperm is entirely passive with regard to its manner of relocation, and travels through a route that nature did not provide.<sup>53</sup>

The multiple technical interventions in GIFT/TOTS violate the continuity between the conjugal act and conception that these natural processes provide. Yet it is still not clear why this continuity provided by the natural processes is so necessary to preserve the principal causality of the conjugal act. There are several questions to be answered. What does it mean to interrupt this continuity provided by the natural processes subsequent to the conjugal act? Does any subsequent intervention or modification of these processes constitute an interruption of the continuity? If this continuity is interrupted, why must one then conclude that the technical intervention replaces the conjugal act? If this continuity is interrupted, why must one conclude that the technical means is then the principal cause of conception? Why cannot these technical interruptions be considered acts of assistance? It cannot be that the number of technical interventions, or simply that there are interventions, are the reasons why the causal continuity between the conjugal act and conception is disrupted.<sup>54</sup>

Nicholas Tonti-Filippini astutely observes that *Donum Vitae* not only requires that there must be a true and proper conjugal act, but also that the child conceived must be the fruit of the conjugal act. His criteria then are two: 1) *There must be a true and proper conjugal act.* 2) *The conjugal act must have a direct causal relationship to the origin of new life.* Tonti-Filippini also provides a way to determine whether the conjugal act has such a direct causal relationship to the origin of new life.

In order to preserve the inseparable connection between the unitive and procreative meanings, aspects or dimensions of the conjugal



act, the direct causal connection between the conjugal act and the origin of a human life must be uninterrupted by any other human act. . . .

In general, those forms of assistance within the context of a marriage which do not displace the conjugal act and do not interrupt the direct causal process between the conjugal act and the origin of new life seem to be acceptable.<sup>55</sup>

He sees here that the conjugal act initiates a causal process, that is, the natural processes subsequent to the conjugal act that lead to conception. A technical intervention that interrupts this natural causal process replaces the conjugal act since the direct causal relationship of the conjugal act to conception has been sundered. Thus, the technical means would be the direct cause of conception and the conjugal act only the indirect cause of conception. In this way, the technical means replaces the conjugal act. For this very reason Tonti-Filippini gives a negative moral evaluation of GIFT/TOTS.<sup>56</sup>

Why must this causal process initiated by the conjugal act remain intact? To support such an opinion Tonti-Filippini provides an analogy with golf. If a caddy were to push the golfer's ball closer to the hole after it had stopped, his intervention would not be an assistance to the golfer's drive, but an act distinct from the drive. These are two distinct acts even though they have the same goal, to move the ball toward the hole. In GIFT/TOTS there are two such distinct acts. The conjugal act is indirectly the cause of conception insofar as it supplies the sperm. However, the technical intervention is the direct cause of conception because fertilization follows as a consequence of that intervention.<sup>57</sup>

Tonti-Filippini does well to speak of assistance and replacement in terms of causality insofar as the child conceived must be the fruit of the conjugal act. However, it is not helpful to distinguish assistance from replacement in terms of direct and indirect causes. From his account, it seems that the last intervening cause is the principal cause. Is that always true? Peter Cataldo, for example, observes that in nature the conjugal act is never the *direct* cause of conception. In the natural processes, which are subsequent to the conjugal act and which lead to conception, there is a whole structure of secondary causes leading to conception. Thus, one cannot conclude, as Tonti-Filippini does, that the conjugal act is not the principal cause of conception because it is not the direct cause of conception.<sup>58</sup> Tonti-Filippini has misunderstood the way the conjugal act causes conception through the subsequent natural processes. It does not cause conception directly but mediately. Therefore, if the principal causality of the conjugal act is to be preserved, the continuity of the natural

causal chain must require something other than that the conjugal act be the direct cause of conception.

In commenting on *Donum Vitae*, Agneta Sutton makes an important contribution to determine what it means to assist the conjugal act. She lists two ways in which a technology may assist the conjugal act: 1) assist the performance of the conjugal act; 2) complete a process initiated by the conjugal act or allow the sexual act to be causally effective in achieving conception.

*Donum Vitae* makes a distinction between, on the one hand, interventions which bypass sexual intercourse and amount to a substitute for it and, on the other, interventions which facilitate the performance of the sexual act, complete a process initiated by the sexual act or allow the sexual act to be causally effective in achieving conception.<sup>59</sup>

Sutton then provides a moral evaluation of reproductive technologies based upon the manner in which a technical intervention may be said to assist. Though Sutton provides no example, she deems that an intervention that helps a couple perform the conjugal act is morally licit.<sup>60</sup> This satisfies her first criterion. One can also note that the natural processes that follow intercourse remain undisturbed. In addition, the conjugal act would be causally effective in achieving conception, since there would be no other way by which the gametes could come in contact with each other. There are no other interventions. In this way her second criterion is also satisfied.

Using these same criteria, Sutton judges another procedure to be morally permissible. After intercourse, a couple may utilize a medical intervention to transport the sperm deposited in the vagina further up the wife's reproductive tract. Such an intervention may not remove the sperm from the wife's body in order to reintroduce it later. Rather it involves the use of an instrument to assist the passage of the sperm from the vagina through the cervix to the uterus, and so enable it to reach the site of fertilization.<sup>61</sup> Sutton believes this meets the second criterion. With this intervention, the conjugal act "is an essential part of the sequence leading to conception. It, and not a medical intervention, initiates this sequence."<sup>62</sup> In this way the intervention is said to complete a process initiated by the conjugal act and so also allows the conjugal act to be causally effective in achieving conception.

Sutton again uses these same criteria to evaluate GIFT/TOTS, which she considers to be illicit. Since GIFT/TOTS removes the sperm from the woman's vagina and later deposits it along with an ovum in a fallopian tube, it initiates anew the process that leads to conception. It does not,



then, complete a process initiated by the conjugal act. Thus, the child conceived would be the fruit of the technical intervention and not the conjugal act.<sup>63</sup> This violates the second criterion.

Note that in this discussion Sutton has overcome the weaknesses of Tonti-Filippini's presentation. For her, it is not necessary that the conjugal act be the *direct* cause of conception in order to preserve its principal causality. Yet, she recognizes the importance of the natural processes, which are subsequent to the conjugal act, and which lead to conception. In order to preserve the principal causality of the conjugal act, the conjugal act must initiate this causal process, and a technical intervention may then complete this causal process, but it may not initiate it anew.

Based upon Sutton's discussion, the following criteria to judge whether a technology assists or replaces the conjugal act may be proposed. 1) *A technical intervention that enables the performance of the conjugal act can be said to assist the conjugal act.* 2) *A technical intervention may complete the natural processes initiated by the conjugal act or may allow the conjugal act to become causally effective in achieving conception. Any intervention that initiates these natural processes anew replaces the conjugal act, for then the technical means is causally effective in achieving conception and not the conjugal act.*

There are weaknesses, though in Sutton's account. She does not demonstrate how she arrives at these criteria. It is not clear why a technical intervention may not initiate the natural processes anew. Implicit in her criteria is the notion that if the technical means initiates the processes that lead to conception instead of completing them, it then is the principal cause in bringing about conception, not the conjugal act. Yet, unfortunately, Sutton does not demonstrate why that is so. More analysis is still needed.

### **b. A Necessary Continuity of the Causal Process**

In a splendid, thorough treatment on the distinction between assistance and replacement, Josef Seifert reaches the following conclusion on the requirements for a reproductive technology if it is to assist the conjugal act:

In the light of these distinctions we may now say that an activity, in order to qualify as assistance to the conjugal act, rather than substituting it, must fulfill the conditions – inasmuch as they concern the relation between the sexual intercourse and conception – which are required quite generally for the continuity of a causal process and which also apply to the causal link between the conjugal act and conception.

Moreover, the unity and continuity of the process requires the preservation of the personal act's meaningful bond to conception. It must not be the case that another personal act lacking the inner unity and meaningful rapport to conception, becomes the principal cause of conception.<sup>64</sup>

To understand Seifert's conclusion one must first note that intercourse is the cause of conception through the natural processes that are subsequent to and initiated by the marital embrace. In general, "a certain effect proceeds from the act [a human act] as from its cause in such a way that we can speak of a continuity of the process which leads from the cause to the effect."<sup>65</sup> In particular, intercourse initiates a causal chain of events that leads to conception. The conjugal act and the subsequent natural causal processes are intimately linked in bringing about conception. Conception would not occur without either. In the marital embrace, the spouses initiate a whole series of events that may continue for days before conception may result. Conception may result from their marital embrace insofar as they are bringing about the conditions in which a new human life can come to be, provided that they do not do anything to prevent conception. Previous discussion has questioned why the natural processes, which are subsequent to the conjugal act, are relevant for determining whether a technical intervention assists or replaces the conjugal act. Such processes are indeed relevant because the conjugal act causes conception through these natural processes. As Cataldo observed: "The unity of the sex act necessarily represents an intrinsic structure of secondary causes intervening between the conjugal act and its effect, fertilization."<sup>66</sup>

For the conjugal act to exercise its causality in bringing about conception, it must do so by initiating a natural causal process, or a causal chain of events. Thus, one must examine how causes that initiate a causal chain of events are said to be the principal causes of the last effect in this causal chain. It will be shown that for an initiating cause to be the principal cause of the final effect, there must be a continuity of the causal process. Seifert describes four marks of the continuity of such a process. If any of these aspects of continuity are disrupted, the cause that initiates the process cannot be said to be the principal cause of the final effect of the process. Thus, if the continuity of the causal chain that is initiated by the conjugal act is disrupted, the conjugal act can no longer be said to be the principal cause of conception.

Finally, there must be a meaningful bond between conception and the human action that brings it about. Seifert observes that only the conjugal act is a worthy cause of conception.<sup>67</sup> Though he does not develop this much, a discussion of the "language of the body," helps to illustrate why



only the conjugal act is such a worthy cause.<sup>68</sup> Only the conjugal act can disclose the child's truth as a person, as a gift to be fulfilled by self-giving in love. Only the conjugal act can disclose the child's truth as an image of God insofar as he is a person who is to fulfill himself by entering into a communion of persons, ultimately by sharing in the communion of the Divine Persons. "Thus assistance to the conjugal act can be defined as an activity which respects the meaningful and non-substitutable bond between the personal conjugal act and procreation as its effect."<sup>69</sup> This meaningful bond is broken when the continuity of the causal process, which is initiated with the conjugal act, is disrupted.

### **i. Temporal Continuity**

The first type of continuity of the causal chain is temporal. Temporal continuity between the cause and effect can be either simultaneous or over a span of time in which the consequences of the original cause continue to occur. To preserve temporal continuity, "there must never be a complete temporal hiatus between the initiation of the causal chain through the principal cause and the last effect produced by it."<sup>70</sup> In simultaneous continuity the effect occurs at the very same time the human person is acting and causing the effect. When someone carries a bag of groceries from the market, the groceries are carried at the same time the person is carrying them, and the groceries cease being carried when he puts them down on the kitchen counter.<sup>71</sup>

What is more pertinent here, though, is the temporal causality over a span of time in which the consequences of the initial causal act continue to be operative. Seifert refers to an example from sport to illustrate this type of continuity in the causal chain.

If a soccer player hits a ball which continues to move, in virtue of the player having shot it, and if it never stops completely from moving in consequence of the original shot, then we are confronted with one minimal condition for the continuity of the causal process that proceeds from the original player and his action. If the ball comes to a complete standstill, during which it does not move in any way under the influence of the original cause, we can no longer say that a further pushing of the ball by another player is an assistance to the original chain of causality. The complete temporal hiatus, during which the ball rests, contradicts the continuity of the causal chain. It requires an entirely new cause to move the ball from where it came to a standstill; and this new cause can no longer be interpreted as a mere assistance to the original causal chain.

Of course, it is still possible that the two causal chains interact so that we can say that one player assists the other to get a goal shot. In fact the whole team should and does in that larger sense assist each other. Nevertheless, it would not be right to say that a player that places the ball near the goal where it came to a complete standstill shot a goal if another player moves it after it has come to a complete standstill and shoots the goal. We cannot say that here the second player assisted the first one's shooting a goal, albeit all will admit that the activity of the first player decisively contributed to, and in that sense assisted, the activity of the second player rendering it possible.<sup>72</sup>

The causal activity of the conjugal act with respect to conception involves this type of temporal continuity over a span of time. When a couple engage in the marital embrace, conception does not come about at the same time as the embrace. Rather, a series of natural processes are initiated that can continue for days before conception may occur. The conjugal act and the subsequent natural causal processes are intimately linked in bringing about conception. Conception would not occur without either.

It also must be noted that the temporal continuity of a causal chain does not mean that all motion cannot cease. There can be various programmed starts and stops. Yet if there are such programmed starts and stops, the influence of the initial cause must still be operative through all these starts and stops for the temporal continuity to be preserved. There must never be a time when the influence of the initial cause ceases to be operative. Otherwise, the temporal continuity is broken.<sup>73</sup>

Not all causal activity initiated by the human person requires temporal continuity. For example, one may make a conditional contract, the effects of which may not be operative until several years after the contract has been established.<sup>74</sup> Yet the causal activity of the conjugal act requires temporal continuity to preserve its principal causality in bringing about conception. As seen, temporal continuity over a span of time is necessary, because conception is not caused simultaneously with the marital embrace. Rather, the subsequent natural processes are necessary to bring about conception, and these subsequent natural processes occur over a span of time.

## **ii. Logical Continuity Derived from Efficient Causality**

The second type of continuity of the causal chain is a logical continuity derived from efficient causality. This type of continuity of the causal chain is linked to the temporal continuity of the causal chain. In this type of logical continuity of a causal chain, one sees a series of distinct causal events, but each one is linked back to the initial causal action of the



human person. For example, someone has set up hundreds of dominos so arranged that one push will topple them all. Such an event really is a series of many causal events. The person pushes the first domino over. That event, even though it ceases after the first domino has fallen, causes the next domino to fall, and that event of falling, even though it ceases, causes the next to fall, and so on. The falling of each domino, though in itself a distinct causal event, can be traced back to the initial push without which none of the dominos would fall. That initial push is the cause of all the dominos falling, from the first to the last. The logical continuity refers to this whole series of events initiated by the first cause, or push of the first domino.<sup>75</sup>

If for some reason this whole chain of events were stopped, the first push would no longer be exerting its causal influence. Perhaps the dominos were not set up properly, and, because there was too much space between two of them, the falling of one domino did not cause the next one to fall. Everything stopped. Perhaps another person intervened and set up an obstacle between two dominos to prevent the falling of one to cause the falling of the other. Everything stopped. If this happened, then in order for the last domino in the line to fall, someone would have to push again. If this were the case, the first push could not be the cause of the falling of the last domino. The second push would be the cause of the falling of the last domino. The initial causal action, the initial pushing of the first domino, could no longer be considered the principal cause of the last effect, the falling of the last domino.

Herman Reith provides a good description of this type of logical continuity found in a series of causes.

An effect may be produced by an arrangement of primary and secondary causes in what is called a *per se* subordinate series of proper causes. Their series has the following characteristics: the secondary causes cannot act except as members of the series, even though they have a nature that is properly a principle of movement; each member of the series affects the total effect; each cause in the series has a mode of causation proper to its nature; there must be a limited number of these causes, a first in the series, and this is not dependent upon other causes but the others are dependent upon it.

In accord with the principle of causality, if there were no first cause to which the effect can ultimately be traced, there would be no effect at all. The other members of the series cannot by themselves produce the effect, since intermediate causes operate not only in virtue of their own nature but require in addition the influence of a superior cause. If all causes were intermediate causes, even if there were an infinite series of such causes, there would not be in the series a

sufficient explanation of the effect that takes place. Only the presence in the series of a cause that is universally the source of the total line of causality will explain the effect.<sup>76</sup>

Such a line of causality can be seen from the conjugal act to conception. The conjugal act is the first cause (the principal cause) in the series. The intermediate causes in the series are the natural processes. These natural processes have a mode of causation proper to their nature. They lead to and so influence the final effect, but they can do so only as a part of the series. They are dependent upon the conjugal act as the first cause in the series and so assist the conjugal act, because their own proper mode of causation could not lead to conception unless it was initiated by another cause. If these natural processes were initiated by a cause other than the conjugal act, they would be subordinate to the cause that initiated the series and not the conjugal act. Thus, the effect (conception) would ultimately be explained by the cause that initiated the series, which would be, then, the principal cause of conception.

For example, one of the natural processes subsequent to the conjugal act is the natural motility of the sperm; this is a type of causation proper to its nature. The natural motility of the sperm can lead to and so influence the final effect of conception only as a part of a series of causal events that is initiated by another cause. The natural motility of the sperm, as well as the other natural causal processes, are dependent upon the cause that initiates the series, and so that cause is the principal cause of conception. If the conjugal act initiates this series of natural causal processes, it is the principal cause of conception. If a reproductive technology initiates this series of natural causal processes, it is the principal cause of conception.

The conjugal act initiates a whole series of causal events leading to conception, and both the temporal continuity and the logical continuity derived from efficient causality must be preserved for the conjugal act to be the principal cause of conception. If the natural processes subsequent to intercourse and leading to conception were stopped and then started again by a technical intervention, the conjugal act would no longer be the principal cause of conception. The technical intervention that starts the processes anew would be the principal cause of conception, for the natural causal processes would be dependent upon the technical intervention in bringing about conception and not the conjugal act.

Cataldo overlooks this type of causal continuity of the natural processes. He insists that the line must be drawn at the immediate causal factors that are natural. He believes that if one does not draw the line there, any intervention subsequent to intercourse would be considered a replacement of the conjugal act.<sup>77</sup> Yet this is not so. A subsequent



intervention usurps the principal causality of the conjugal act if it stops this series of natural causal events, or if it initiates this series of natural causal events by itself or anew. Thus, it is possible to have a subsequent intervention that still assists the conjugal act, provided that, even though it might modify or affect this natural causal chain to some extent, it does not stop this causal chain of events or it does not initiate this causal chain of events by itself or anew.

### **iii. Logical Continuity Derived from Final Causality**

There is a third type of continuity of a causal chain, another type of logical continuity, this one derived from final causality. Take the example of a contractor building a house. He initiates many causal actions to complete construction of the house and each one is united by the same goal, the construction of the house. With respect to the same goal, all these individual causal actions fall under the one activity of building the house. In fact it does not matter how many individual actions or agents are involved, provided that they are all united under the same goal. The contractor might engage several subcontractors for different parts of the work, pouring the foundation, plumbing, wiring, etc. By the logical unity flowing from the same goal of building the house, all these actions fall under the one activity of building the house.<sup>78</sup>

This type of logical continuity is necessary for the continuity of the causal chain. If the end is changed to something else, the continuity is broken. If one soccer player passes the ball to a second player to score a goal, but the second player turns traitor and passes the ball to the opposing team so that the opposing team might score, the continuity is broken.<sup>79</sup>

Though this type of logical continuity is necessary to preserve the continuity of a causal chain, by itself it is not sufficient. Temporal continuity and the logical continuity derived from efficient causality are also necessary. This was seen above in the discussion of McCarthy's and Grisez's moral analysis of GIFT/TOTS. They hold that there must be a moral unity derived from the end between the conjugal act and the technical intervention. Grisez proposes that as long as there is a true conjugal act, and as long as the semen used is deposited in the vagina and then removed, the subsequent technical interventions are said to assist the conjugal act in achieving conception insofar as they share in the same goal as the conjugal act, achieving conception. If, however, the goals of the subsequent interventions are diverse from the conjugal act, for example, delaying conception to another time or experimentation, the technical interventions can no longer be said to assist the conjugal act. Grisez rightly observes that the sameness of end must be maintained, but he overlooks

that the logical continuity derived from efficient causality and the temporal continuity of the natural causal processes initiated with the conjugal act, as well as the next type of continuity to be discussed, must also be preserved.

#### iv. The Continuity between Principal Cause and Effect

The final type of continuity of a causal chain is based on the distinction between principal and assisting causes. There must be continuity between the principal cause and the effect. To maintain this continuity, the principal cause must be chiefly responsible for bringing about the effect, and the assisting cause must play a subordinate role in bringing about the effect. Otherwise, the "principal cause" is no longer the principal cause.<sup>80</sup>

Seifert, unfortunately, does not clarify how one determines which cause is chiefly responsible for bringing about the effect, and which cause is subordinate. This determination, in fact, is difficult. Instead, he provides examples of assisting causes. An assisting cause is one that provides the means that render possible the effects of the principal cause or removes obstacles to the principal cause so that it may carry out its action. For example, the use of artificial fallopian tubes to replace the obstructed ones or the introduction of slippery S mucus into the vagina would render possible the effects of the conjugal act.<sup>81</sup>

The evaluation other authors provide of GIFT/TOTS, if further developed, can illustrate another way to determine whether something is a principal or assisting cause. Donald DeMarco, Benedict Ashley, Kevin O'Rourke, William May, and John Haas observe that when GIFT/TOTS is employed, the conjugal act is merely incidental to the achievement of pregnancy, for it is only a means to obtain sperm. The procedure could be employed successfully without the conjugal act at all, provided that the sperm is obtained in some way other than the conjugal act.<sup>82</sup> Thus, they implicitly propose the following criterion: *There must be an essential link between the conjugal act and the technical means employed, that is, the conjugal act must not be merely incidental to the success of the technical means employed.* Thus, any technical means that does not have such an essential bond with the conjugal act replaces it. The child conceived would be the fruit of the technical means, because the conjugal act remains only incidental to the whole process. Based on this criterion, These authors judge GIFT/TOTS to be illicit. In GIFT/TOTS, the conjugal act is merely incidental to the process. It is only employed to obtain sperm. It has no essential link to the technical process.

This criterion is straightforward and quite helpful. Yet a notion of causality, namely the distinction between principal cause and assisting



cause, must be considered. In light of this further elaboration, one can then see how helpful indeed this criterion is for determining whether something is a principal or assisting cause. As already discussed, the child conceived must be the fruit of the conjugal act. A technical means may assist the conjugal act. So the conjugal act must be the principal cause of conception, and any technical means must be the assisting cause of conception. A principal cause is necessary and primarily responsible for bringing about the effect. An assisting cause plays a subordinate role in bringing about the effect. It is not always easy to determine which cause is primary and which cause is subordinate in bringing about the effect. However, if the conjugal act remains only incidental to the whole process, and if the technical means could be employed successfully without it, then the conjugal act cannot be the principal cause of conception. Having examined this notion of causality to develop further this criterion, one might elaborate the criterion in this way: *If the conjugal act is merely incidental to the technical means employed, that is, if the technical means can be employed successfully without it, the conjugal act can no longer be considered the principal cause of conception. It has been replaced by the technical means.* Though this criterion elaborates a necessary condition for determining whether a technical intervention plays a subordinate role to the conjugal act, it is not sufficient to determine whether the technology plays a subordinate role in all cases. It may be possible, for example, that a reproductive technology requires the conjugal act to be successful, but the conjugal act might still play the subordinate role in bringing about conception.

There is another way in which other human agents as causes may be said to be assisting causes to the principal cause who is another human agent. To elucidate this, one may return to the example of the contractor who is building a house. He employs several subcontractors in building this house. All of the people involved share in the same end and hence the same activity of building the house. The contractor himself may do the minority of the actual labor of building, but he could still be considered the principal cause of the house insofar as all the subcontractors are working under his direction. In this way he plays the primary role in bringing about the house, and the subcontractors play a subordinate role.

These types of principal and assisting causes, in which other human agents assist the principal human agent insofar as they are under the principal's overall direction, is also evident in the use of reproductive technologies. For example, a married couple has difficulty conceiving and employs doctors and technicians to carry out the GIFT/TOTS procedure. Insofar as the couple has initiated this procedure and sees to its overall direction, they could be considered the principal causes of the resulting

conception, and the doctors and technicians the assisting causes. However, this does not mean that the procedure assists **the conjugal act!** The doctors and technicians may be assisting the spouses to achieve conception in this way, but they may not be assisting the spouses to achieve conception by assisting the conjugal act to achieve conception. This type of assisting causality in which other human agents are under the direction of a principal human agent does not guarantee that the conjugal act is assisted. Magisterial teaching indicates that the conjugal act of the spouses may be assisted but not replaced. It is not simply a matter of just assisting the spouses in achieving conception.

#### v. Summary

In sum, it is seen why there must not be a break in the continuity of the natural causal processes which are subsequent to intercourse and which lead to conception. The conjugal act must be the principal cause of conception, and it exercises this causality through a natural causal process or a natural causal chain. The conjugal act and the subsequent natural causal processes are intimately linked in bringing about conception. Conception would not occur without either. In the marital embrace, the spouses initiate a whole series of natural causal events that may continue for days before conception may result.

Thus, for the conjugal act to exercise its causality in bringing about conception, it must do so by initiating a natural causal process. By examining how principal causes work through a series of subordinate causes, it has been seen that if the continuity of the causal process is interrupted, then the initial cause can no longer be considered the principal cause. Seifert proposes four aspects to the continuity of the process: temporal continuity, logical continuity derived from efficient causality, logical continuity derived from final causality, and the continuity derived from the link between the principal cause and the effect. If any aspect of this continuity is broken, the initial cause of the process can no longer be considered the principal cause of the final effect.

It seems, though, that the first two aspects of the continuity of the causal process can be reduced to one. If there is ever a complete temporal hiatus in the causal process, the first initial cause has stopped exerting its influence, and likewise, then, the logical link between the cause initiating the process and all the subsequent causal events in the series is sundered. Any intervening cause starting the process again would then become the principal cause of the final effect of the process, for the initial cause would no longer be exerting its causal influence. Thus, Seifert's first two aspects



of the continuity of the causal process will be considered as one, that is, the continuity derived from efficient causality.

There remain then, two additional aspects of continuity. If a subsequent, intervening cause does not share in the same goal as the initial cause that started the process, it cannot be considered to assist the initial cause. The continuity of the process is thus broken. Finally, if any subsequent cause does not play a subordinate role in bringing about the final effect of the causal chain, but rather is primarily responsible for bringing about the final effect, then the continuity between the cause initiating the process and the final effect has been broken insofar as that first initiating cause cannot be considered the principal cause of the final effect of the causal chain. Thus, any investigation into assistance or replacement must examine whether the three aspects of the continuity of the causal chain are respected: (1) continuity derived from efficient causality, (2) continuity derived from final causality, and (3) continuity derived from the link between principal cause and effect.

## **B. The Criteria to Determine Whether a Reproductive Technology Assists or Replaces the Conjugal Act.**

In light of this discussion, it is quite clear that there are two basic criteria to determine whether a reproductive technology assists or replaces the conjugal act: 1) *There must be a natural conjugal act open to life.* 2) *The child conceived must be the fruit of the conjugal act; that is, the conjugal act must be the principle cause of conception.* These criteria are clearly indicated in *Donum Vitae*. It is clear and easy to determine whether the first criterion is met. Yet, how does one determine whether the child conceived is the fruit of the conjugal act? How does one determine whether the conjugal act is the principal cause of conception? In light of the previous discussion, I propose the following criteria to determine whether a reproductive technology replaces the conjugal act as the principal cause of conception.

a) The conjugal act remains the principal cause of conception if the technical means only enables it to be performed.

b) The conjugal act remains the principal cause of conception if the technical means only removes obstacles that prevent the conjugal act from being effective, or if it only provides a means for the conjugal act to be effective. In other words, the conjugal act remains the principal cause of conception if the technical means only provides the active condition(s) for the conjugal act to exercise its own principal causality.

c) The conjugal act is not the principal cause of conception if the natural causal chain initiated by the conjugal act and leading to conception is interrupted by the technical means, that is, if the continuity derived from efficient causality is violated.

i.) The natural causal process is interrupted if the technical means stops it.

ii.) The natural causal process is interrupted if the sperm are removed from the woman's body after the conjugal act has taken place.

iii.) The natural causal process is interrupted if conception occurs outside the woman's body.

iv.) The natural causal process is interrupted if the technical means initiates the process anew once it has been stopped, or if the technical means, instead of the conjugal act, initiates the natural causal chain leading to conception.

d) The technical means does not assist the conjugal act if it does not share in the same goal as the conjugal act, that is, if it violates the second aspect of the continuity of the causal process, the continuity derived from final causality.

e) The conjugal act is not the principal cause of conception if it is merely incidental to the technical intervention, or if the technical means plays the primary and not the subordinate role in causing conception. This would be a violation of the third aspect of the continuity of the causal process, the continuity derived from the link between principal cause and effect.

i.) The conjugal act is incidental to the technical means if it merely serves as a means to obtain sperm.

ii.) The conjugal act is incidental to the technical means if it does not require the conjugal act, that is, if the procedure can be successful without the conjugal act.

iii.) The conjugal act is incidental to the technical means if the gametes used by the procedure to obtain conception do not pertain to the conjugal act. The gametes do not pertain to the conjugal act if the



sperm used in the procedure are intentionally withheld from the conjugal act, or the ova are removed prior to the conjugal act.

A definition of assistance and replacement of the conjugal act can now be proposed. *Assistance to the conjugal act is any means that enables the conjugal act to be performed, or any means that enables the conjugal act to exercise its principal causality in achieving conception, either by removing obstacles to the causal activity of the conjugal act or by supplying its own causal activity that does not violate any of the three aspects of the continuity of the causal process between the conjugal act and conception.* *Replacement of the conjugal act is any means used to achieve conception that becomes the principal cause of conception, either because it does not entail the conjugal act at all, or because it violates any of the three aspects of the continuity of the causal process between the conjugal act and conception.*

### C. Application of the Criteria to Selected Reproductive Technologies

To better understand these criteria to determine assistance and replacement, they will now be applied in a moral evaluation of a few selected reproductive technologies, Low Tubal Ovum Transfer (LTOT), Gamete Intrafallopian Transfer (GIFT) or Tubal Ovum Transfer with Sperm (TOTS), Intrauterine Insemination (IUI), and two methods that have been proposed to help with a husband's sperm deficiency.

LTOT can be described in this way:

This procedure . . . transfers only the woman's egg. The egg is collected by laparoscopy and replaced for fertilization in the lower portion of the fallopian tube close to the uterus. The couple engages in sexual intercourse before and after replacement of the egg.<sup>83</sup>

This procedure assists the conjugal act and so could be licit. It meets the following criteria for determining assistance and replacement. There is a true and proper conjugal act (1). The conjugal act is necessary for the success of the procedure (2-e). The procedure does not interrupt the causal chain of natural processes initiated by the conjugal act (2-c), because it does not stop the causal chain (2-c-i), the sperm are not removed from the mother's body after intercourse and then later reintroduced (2-c-ii), fertilization occurs within the mother's body (2-c-iii), and it does not initiate the causal chain anew (2-c-iv). Finally, the procedure removes obstacles to the conjugal act and so allows it to be effective (2-b).

Perhaps a bit of explanation of how it meets the criteria "2-b" and "2-c" will help. Why does LTOT not interrupt the causal chain? The ovum is removed from the mother's body after the first act of intercourse. Why does not the removal of the ovum subsequent to intercourse interrupt the causal chain; whereas, removal of the sperm after intercourse interrupts of causal chain? There is a disturbance in the normal natural processes. The release of the ovum from the ovary and its movement into the fallopian tube is a natural process of the mother's body. Yet it is not properly part of the causal activity initiated by the conjugal act. It occurs periodically whether there is a conjugal act or not. Thus, complete stop, disruption, alteration, or substitution of this natural process of the ovum's release and migration down the fallopian tube does not disrupt the natural causal chain, which is initiated by the conjugal act, so as to displace the conjugal act as the principal cause of conception. Instead, this natural process of the mother's body supplies a condition for the conjugal act to be successful by supplying an ovum to fertilize. Similarly in LTOT, the transfer of the ovum past blockage in the fallopian tube, even though it modifies or substitutes a natural process, supplies an active condition (criterion 2-b) for the conjugal act to be successful. It in no way usurps the principal causality of the conjugal act.

GIFT/TOTS can be described in this way. The ova are obtained by laparoscopy. The sperm are collected after intercourse using a perforated silastic sheath, or from the vagina or cervix, and then "washed." The gametes are placed in a catheter separated by an air bubble or culture medium and then injected into the fallopian tube.<sup>84</sup>

This procedure replaces the conjugal act because it violates the following criteria. The conjugal act is incidental to the procedure (2-e) insofar as it merely serves as a means to supply sperm (2-e-i), insofar as the procedure can be successful without the conjugal act (2-e-ii), and, depending upon how GIFT/TOTS is employed, insofar as the gametes used by the procedure to achieve conception do not pertain to the conjugal act (2-e-iii). In addition, the procedure breaks the natural causal chain initiated by the conjugal act (2-c), because it stops it (2-c-i), because it removes the sperm from the mother's body (2-c-ii), and because it initiates the causal chain anew (2-c-iv). Thus GIFT/TOTS is morally illicit.

IUI is a type of artificial insemination in which the sperm are washed and then deposited in the uterine cavity by means of a catheter.<sup>85</sup> Cataldo suggests a modified version of this procedure that he judges could be morally licit. In this modified version, the sperm are collected with a perforated silastic sheath used in a conjugal act. They are then "washed" and deposited in the uterine cavity by means of a catheter.<sup>86</sup>



The moral evaluation of this modified version of IUI is similar to GIFT/TOTS. It replaces the conjugal act because it violates the following criteria. The conjugal act is incidental to the procedure (2-e) insofar as it merely serves as a means to supply sperm (2-e-i), insofar as the procedure can be successful without the conjugal act (2-e-ii), and insofar as the gametes used to achieve conception do not pertain to the conjugal act (2-e-iii). In addition, the procedure breaks the natural causal chain initiated by the conjugal act (2-c), because it stops it (2-c-i), because it removes the sperm from the mother's body (2-c-ii), and because it initiates the causal chain anew (2-c-iv). Thus, even this modified form of IUI is morally illicit for it replaces the conjugal act.

Finally, two methods have been proposed to help a husband with sperm deficiency. Thomas O'Donnell, SJ has proposed this method to help achieve conception when the husband suffers from oligospermia.

Oligospermia (a deficiency of sufficient spermatozoa in the husband's ejaculate) may be overcome by collecting amounts of the husband's ejaculate in acts of natural intercourse with a perforated condom, which can be observed and spun down in the laboratory to obtain a residue with a heavy concentration of sperm which can be deposited artificially within the generative tract of the wife either immediately before or after a normal act of intercourse, thus fortifying the ejaculate of that act of intercourse with supplemental sperm previously collected in legitimate marital acts.<sup>87</sup>

Nicholas Tonti-Filippini has proposed a similar procedure for another circumstance.

A man who had become sterile from some form of therapy, such as for carcinoma, might have had the foresight to freeze his own sperm (having been licitly obtained), prior to the therapy. The sperm might then be used by the spouses in the context of the conjugal act, knowing that the ejaculate was sterile, but adding to it the previously stored sample.<sup>88</sup>

These methods replace the conjugal act because they violate the following criterion. The conjugal act is incidental to the procedure (2-e) because the procedure could be successfully employed without it (2-e-ii). What really takes place here is an act of artificial insemination that just happens to be accompanied by an act of intercourse. These methods could be successful without the accompanying act of intercourse. Because intercourse is merely incidental to the success of conception, it cannot be

considered the principal cause of conception. Thus, these methods are morally illicit.

### Conclusion

This investigation began with a question. How does one determine whether a reproductive technology assists or replaces the conjugal act? As a result, an effort was made to propose criteria by which one can distinguish assistance from replacement. Was this investigation successful? Was the question that began this investigation answered? Yes and no. The question has been answered, but still more development would be helpful. This investigation has articulated a better understanding of assistance and replacement. It has proposed useful criteria to determine whether a reproductive technology assists or replaces the conjugal act. Yet further development would be helpful to apply better the Church's teaching. A deeper understanding of ways to distinguish principal and assisting causes could foster an improved articulation of criterion 2-e, the criterion which is based on the continuity of the causal process that is derived from the link between principal cause and effect. If one has a deeper understanding of principal and assisting causes, one can determine better when another cause usurps the principal causality of the conjugal act. In addition, a further analysis might help to determine how a causal process is stopped, that is, how the continuity of the causal process that is derived from efficient causality is violated. This could foster an improved articulation of criterion 2-c.

In conclusion, the human person should stand in awe and wonder at the mystery of human life, at the mystery of God's creative gift of human life. Contemplation of God's ineffable self-gift in creating leads to deeper understanding, deeper esteem, and deeper reverence for all human persons, for all human life. Only from this interior disposition permeated with Divine Wisdom, should all decisions about reproductive technologies be made. "So God created man in his own image, in the image of God he created him; male and female he created them" (Gn. 1: 27).

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### References

1. Pope Pius XII, Allocution to the Fourth International Conference of Catholic Doctors, 29 September 1949: AAS 41 (1949) 557-561, English translation from *Papal Teachings on Matrimony*, ed. The Benedictine Monks of Solemes, 381-385, trans. Michael J. Byrnes (Boston: St. Paul Editions, 1963); Allocution to Italian



Catholic Midwives, 29 October 1951: AAS 43 (1951) 835-854, English translation from *Papal Teachings on Matrimony*, 405-434; Allocution to the Second World Congress on Fertility and Human Sterility, 19 May 1956: AAS 48 (1956) 467-474, English translation from *Papal Teachings on Matrimony*, 482-492; and Allocution to the Seventh International Hematological Congress, 12 September 1958: AAS 50 (1958) 732-740, English translation from *Papal Teachings on Matrimony*, 513-525.

2. Congregation for the Doctrine of the Faith, Instruction on Respect for Human Life in Its Origin and on the Dignity of Procreation, *Donum Vitae*, 22 February 1987: AAS 80 (1988) 70-102. English translation from *Origins* 16, no. 40 (1986-1987) 697-711.

3. For example, *Donum Vitae* gives a negative evaluation to heterologous artificial fertilization that is carried out by two different methods: artificial insemination and in vitro fertilization. The instruction also gives a negative evaluation to homologous in vitro fertilization. (The term "heterologous" refers to those means that entail a third party intrusion into the unity of a married couple, e.g., donation of sperm or ova, or a surrogate mother. The term "homologous" refers to those means that involve only a married couple and the medical technicians.) However, with respect to homologous artificial insemination, the instruction gave a negative evaluation except for those technical means that facilitate but do not substitute the conjugal act. See *Donum Vitae*, II: AAS 80 (1988) 85-97. Unfortunately, the terminology of the instruction muddies the water at this point insofar as it uses homologous artificial insemination as a genus with two species: 1) those means which substitute the conjugal act, and 2) those means which facilitate the conjugal act. From a moral perspective the two species are entirely different types of actions; thus, it is better not to include them under the same genus of homologous artificial insemination. An improvement in terminology would consider homologous artificial insemination to refer to those means which replace the conjugal act and assisted insemination to refer to those means that assist the conjugal act. The *Catechism of the Catholic Church* takes a step in the right direction here when it states without qualification that homologous artificial insemination is morally unacceptable. However, the *Catechism* fails to mention that those means to achieve conception that assist the conjugal act are morally acceptable. See *Catechism of the Catholic Church* (Vatican City: Libreria Editrice Vaticana, 1994. English translation, Liguori, MO: Liguori Publications, 1994) no. 2377.

4. Bartholomew Kiely, Press conference, in *Origins* 16, no. 40 (1986-1987) marginal notes, 699-700.

5. Edward V. Vacek, SJ, "Vatican Instruction on Reproductive Technology," *Theological Studies* 49 (1988) 130-131.

6. For the purposes of this essay, the procedure known as Tubal Ovum Transfer (TOT), called by some Tubal Ovum Transfer with Sperm (TOTS), and Gamete

Intrafallopian Transfer (GIFT) will be considered interchangeably. Some use these names to refer to virtually identical procedures, while others use the various terms to refer to different, but similar procedures. This thesis will consider GIFT/TOTS in this way. The ova are obtained by laparoscopy. The sperm are collected after intercourse using a perforated silastic sheath, or from the vagina or cervix, and then "washed." The gametes are placed in a catheter separated by an air bubble or culture medium and then injected into the fallopian tube. Though in practice the sperm are obtained from the silastic sheath and not from the vagina or cervix, some suggest that the sperm could be obtained from the vagina or cervix. Whether the sperm utilized in the procedure are intentionally withheld from the conjugal act and collected in the silastic sheath, or whether they are retrieved from the cervix or vagina, does have moral relevance, which will be subsequently noted. For an account of the development of this procedure, see Donald T. DeMarco, *Biotechnology and the Assault on Parenthood* (San Francisco: Ignatius Press, 1991) 214-219.

7. Carlo Caffarra, "The Moral Problem of Artificial Insemination," *Linacre Quarterly* 55, no. 1 (1988) 37-43.

8. *Ibid.*, 42. Emphasis original.

9. *Donum Vitae*, II., B., 4: AAS 80 (1988) 91.

10. Nicholas Tonti-Filippini, "«*Donum Vitae*» and Gamete Intra-Fallopian Tube Transfer," in «*Humanae Vitae*»: 20 Anni Dopo: Atti del Congresso Internazionale di Teologia Morale (Roma, 9-12 novembre 1988) (Milan: Edizioni Ares, 1989) 797. It should be noted that the conjugal act in and of itself does not cause the coming to be of a new human person. Nonetheless, for the purposes of this investigation it will be sufficient to examine only how the conjugal act causes conception/fertilization, for that is the role it plays in the coming to be of a new human person. Along this line Josef Seifert observes: "We could see the way in which a new human person proceeds from the conjugal act even in a different and more differentiated light if we took into the consideration the fact that the human activity is only a partial cause of the new human person, whose spiritual-substantial being (whose soul) can never be sufficiently explained either by biological chains of causality or by human personal acts. Yet we prescind here from this aspect as much as possible because it involves a complexity in the causes of a new human person to clarify which is not necessary in order to understand the distinction between assistance and substitution of the conjugal act." Josef Seifert, "Substitution of the Conjugal Act or Assistance to It? IVF, GIFT and Some Other Medical Interventions. Philosophical Reflections on the Vatican Declaration «*Donum Vitae*»,» *Anthropotes* 4 (1988) 274.

11. Orville N. Griesse, *Catholic Identity in Health Care: Principles and Practice* (Braintree, MA: The Pope John XXIII Medical-Moral Research Center, 1987) 47. It is important to note that in the manner in which GIFT/TOTS is most commonly



employed, conception would most likely result from the sperm that are intentionally withheld from the conjugal act and collected in the silastic sheath, not from the sperm deposited in the vagina. This has important moral relevance, which will be pointed out in the consideration of Germain Grisez's position.

12. Griese, 48. Lloyd Hess also believes the short time duration would preserve the moral unity between the conjugal act and the technical procedure. See Lloyd Hess, "Assisting the Infertile Couple," *Ethics and Medics* 11, no. 2 (1986) 3.

13. Donald McCarthy, "TOTS is for Kids," *Ethics and Medics* 13, no. 12 (1988) 2.

14. Donald McCarthy, "GIFT? Yes!" *Ethics and Medics* 18, no. 9 (1993) 3-4; "Response," in *Reproductive Technologies, Marriage and the Church*, ed. Donald G. McCarthy (Braintree, MA: The Pope John XXIII Medical-Moral Research Center, 1988) 142-144; "TOTS is for Kids," 1-2.

15. Germain Grisez, *The Way of the Lord Jesus, Volume 3: Difficult Moral Questions* (Quincy, IL: Franciscan Press, 1997) 245, 247-248.

16. Ibid., 245, 247.

17. Ibid., 248.

18. McCarthy, "GIFT? Yes!" 4.

19. McCarthy, "Response," 145.

20. Sandra Magie sees in vivo conception as the primary criterion, for it preserves the meanings and values that are expressed in the language of the body and the union of human persons. However, she merely repeats *Donum Vitae* and does not elaborate why this is so. Sandra C. Magie, *A Determination of the Liceity of Gamete Intrafallopian Transfer In Light of Magisterial Teachings on Selected Medical Technologies*. Dissertation. (Rome: Academia Alphonsiana, 1991) 123, 125.

21. Peter J. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," in *The Gospel of Life and the Vision of Health Care*, "Proceedings of the Fifteenth Workshop for Bishops," ed. Russell E. Smith (Braintree, MA: The Pope John XXIII Medical-Moral Research Center, 1996) 79. Emphasis original.

22. Ibid., 81, 86.

23. Ibid., 86. Emphasis original.

24. Ibid., 80.

25. Ibid., 82. The internal citation is from *Donum Vitae*, II, B, 4, which in turn is a citation of the Code of Canon Law, c. 1061.
26. Ibid., 84. The internal citation is from Robert Kreyche, *First Philosophy* (New York: Henry Holt, 1959) 236.
27. Ibid.
28. Kreyche, 235-236. Emphasis original.
29. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 84.
30. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 84-85; "Reproductive Technologies," *Ethics and Medics* 21, no. 1 (1996) 2; and "GIFT as Assistance," *Ethics and Medics* 22, no. 12 (1997) 3.
31. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 88; "Reproductive Technologies," 2; and "GIFT as Assistance," 3.
32. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 85, 86, 88; and "Reproductive Technologies," 2. For the sake of argument, Cataldo here presumes that in vitro fertilization could be employed with a conjugal act and the sperm collected in a morally permissible manner. Nonetheless, IVF would still be immoral because it supplies the immediate causal factors that bring about fertilization.
33. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 86. Emphasis original.
34. Ibid., 81.
35. Ibid., 82. The internal citation is from *Donum Vitae*, II, B, 4, which in turn is a citation of the *Code of Canon Law*, c. 1061.
36. Ibid., 83.
37. Ibid. Emphasis added.
38. Ibid., 83-84.
39. Ibid. Emphasis added.
40. Ibid., 83.
41. Ibid. Emphasis added.



42. Ibid., 83-84.
43. Martin O. Vaske, SJ, *An Introduction to Metaphysics* (New York: McGraw-Hill, 1963) 128. Emphasis original.
44. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 84-85.
45. Ibid., 86. Emphasis original.
46. Ibid. This consideration of IVF requires that there be a natural conjugal act and that the sperm utilized in the procedure be collected in a morally acceptable way.
47. *Donum Vitae*, II., B., 4: AAS 80 (1988) 91.
48. Tonti-Filippini, 798.
49. Cataldo, "GIFT as Assistance," 3.
50. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 79, 92.
51. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 85, 92-93; and "GIFT as Assistance," 3-4.
52. DeMarco, *Biotechnology and the Assault on Parenthood*, 226-233; "Catholic Moral Teaching and TOT/GIFT," in *Reproductive Technologies, Marriage and the Church*, ed. Donald G. McCarthy (Braintree, MA: The Pope John XXIII Medical-Moral Research Center, 1988) 130-135; and "GIFT as Replacement," *Ethics and Medics* 22, no. 11 (1997) 4; Thomas J. O'Donnell, SJ, *Medicine and Christian Morality*, 3rd ed. (New York: Alba House, 1996) 263-264; and John M. Haas, "GIFT? No!," *Ethics and Medics* 18, no. 9 (1993) 2-3.
53. DeMarco, *Biotechnology and the Assault on Parenthood*, 210.
54. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching, 92-93; and "Reproductive Technologies," 2-3.
55. Tonti-Filippini, 801.
56. Ibid., 799-801.
57. Ibid., 799-800.

58. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 92-93.

59. Agneta Sutton, *Infertility and Assisted Conception What You Should Know: Answers to Questions about Medical Techniques of Assisted Conception* (London: The Catholic Bishop's Joint Committee on Bio-Ethical Issues, 1993) 46.

60. Ibid.

61. Ibid., 46-47.

62. Ibid., 47.

63. Ibid., 46-47.

64. Josef Seifert, "Substitution of the Conjugal Act or Assistance to It? IVF, GIFT and Some Other Medical Interventions. Philosophical Reflections on the Vatican Declaration «*Donum Vitae*»,» *Anthropotes* 4 (1988) 282.

65. Ibid., 274.

66. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 92.

67. Seifert, 282.

68. Cf. *Donum Vitae*, II., B., 4: AAS 80 (1988) 91-92. See also, John F. Doerfler, "Is GIFT Compatible with the Teaching of *Donum Vitae*?," *Linacre Quarterly* 64 (1997) 19-22.

69. Seifert, 282.

70. Ibid., 276.

71. Ibid., 276-277.

72. Ibid., 276.

73. Ibid.

74. Ibid.

75. Ibid., 277-278.

76. Herman Reith, *The Metaphysics of St. Thomas Aquinas* (Milwaukee: Bruce, 1958) 163.



77. Cataldo, "GIFT as Assistance," 3-4; and "The Newest Reproductive Technologies: Applying Catholic Teaching," 85, 92-93.

78. Seifert, 278-279.

79. Ibid., 279.

80. Ibid.

81. Ibid.

82. DeMarco, "Catholic Moral Teaching and TOT/GIFT," 133; Benedict M. Ashley, OP, and Kevin D. O'Rourke, OP, *Health Care Ethics*, 4th ed. (Washington, DC: Georgetown University Press, 1997) 247; William E. May, "Catholic Teaching on the Laboratory Generation of Human Life," in *The Gift of Life*, The Proceedings of a National Conference on the Vatican Instruction on Reproductive Ethics and Technology, ed. Marilyn Wallace, RSM, Ph.D., and Thomas W. Hilgers, MD (Omaha, NE: Pope Paul VI Institute Press, 1990) 88; and John M. Haas, "GIFT? No!" *Ethics and Medics* 18, no. 9 (1993) 2

Donald DeMarco also sees another way in which conception is dissociated from the conjugal act. He observes that when GIFT/TOTS is employed, the success of the conjugal act and the success of the technical procedure frustrate one another. The sperm are collected using a perforated silastic sheath, allowing some of the sperm to be deposited naturally in the vagina. The sperm that are collected in the sheath are then treated and introduced along with an ovum into a fallopian tube by means of a catheter. If any of the sperm introduced into the fallopian tube by the technical procedure fertilizes the ovum, then this success of the procedure prevents any of the sperm naturally deposited in the vagina from fertilizing the ovum, thus frustrating the success of the natural conjugal act. The converse is also true. If any of the sperm naturally deposited in the vagina fertilizes the ovum, then the success of the technical procedure is frustrated. This is one of the reasons DeMarco judges GIFT/TOTS to be illicit. However, this is not helpful. When any sperm fertilizes an ovum, it prevents the other sperm from doing so. If the injection of sperm, which are obtained with a perforated silastic sheath in an act of intercourse, is considered an act of assistance, the success of the procedure, which prevents other sperm deposited in the vagina from fertilizing the ovum, is not much different from what takes place in unassisted intercourse, in which the sperm that fertilizes that ovum prevents the other sperm from doing so. See *Biotechnology and the Assault on Parenthood*, 228; "Catholic Moral Teaching and TOT/GIFT," 133-134; and "GIFT as Replacement," 4.

83. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 63.

84. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 63; and Tonti-Filippini, 795-796.

85. Cataldo, "The Newest Reproductive Technologies: Applying Catholic Teaching," 64 .

86. Ibid., 87.

87. O'Donnell, 262.

88. Tonti-Filippini, 802.